

United States Patent [19]

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Benton et al.

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[54] **DATA LOGGING AND TRANSFER SYSTEM USING PORTABLE AND RESIDENT UNITS**

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[58] Field of Search **364/400-401, 364/403, 405-408, 413-415, 418, 200 MS File, 900 MS File; 235/379-381, 383, 491; 340/825.33**

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,001,550	1/1977	Schatz	235/61.7 B
4,007,355	2/1977	Moreno	235/61.7 R
4,032,931	6/1977	Haker	340/365 R
4,053,735	10/1977	Foudos	235/61.9 R
4,115,870	9/1978	Lowell	364/900
4,277,837	7/1981	Stuckert	364/900
4,321,672	3/1982	Braun et al.	364/408
4,341,951	7/1982	Benton	235/379
4,355,369	10/1982	Garvin	364/900
4,415,065	11/1983	Sandstedt	364/401 X
4,417,306	11/1983	Citron et al.	364/415
4,423,313	12/1983	Tanigaki	235/379

4,428,050	1/1984	Pellegrino et al.	364/414
4,454,414	6/1984	Benton	235/379
4,460,965	7/1984	Trehn et al.	364/401 X
4,472,626	9/1984	Frid	235/379
4,482,802	11/1984	Aizawa et al.	235/379
4,485,300	11/1984	Peirce	235/380

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[57] **ABSTRACT**

A system for transferring electronic funds data includes portable modules (20) each having a display (24) and a keyboard (26) together with an optical interface (36) adapted to transfer electronic funds data to other modules either directly or over the telephone lines through resident units (62). The modules (20) are operable in either a credit mode or a debit mode using a selector switch (30). Prior to establishing communication, the module determines whether it is in communication with another module or with a resident unit, then undergoes a "handshaking" protocol to establish half-duplex, bidirectional communication, before funds are actually transferred. Transaction records are retained in a random access memory (44) within each module. The transaction records are periodically downloaded to a central computer, or printed locally to generate a hard copy. Other applications of the system include monitoring physiological data, maintaining work-time records and monitoring radiation dosage.

8 Claims, 81 Drawing Figures

